

Fuel Cell Codes and Standards

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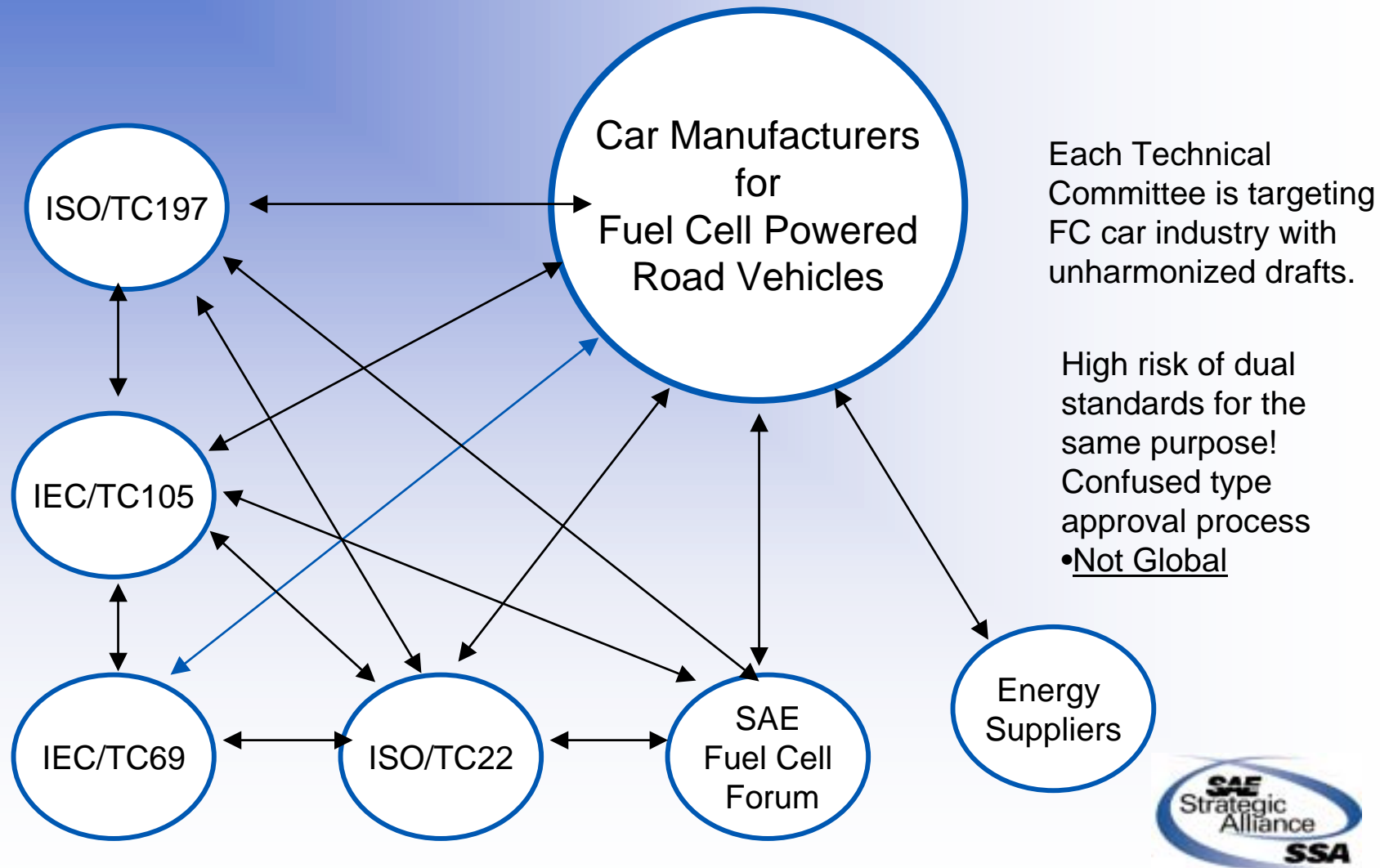
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Project Duration: Thirty-six months

Total Estimated Funding: \$ 738,000.00



Not Recommended Landscape for Making Standards for Fuel Cell Car Industry



Technical Goals and Objectives

Facilitate and accelerate the development of codes, standards and recommended practices for fuel cell powered vehicles in order to smoothly and uniformly transition fuel cell vehicles into the market place.



Technical Concept

The Society of Automotive Engineers (SAE) will form relationships with sectors, organizations and committees that effect or are affected by fuel cell technology for vehicles. These include, but are not limited to, vehicle manufacturers and their suppliers, fuel cell manufacturers and their suppliers, energy providers and their suppliers, national and international government agencies and other organizations involved with the development of the necessary and ancillary infrastructure and support facilities/structures.

SAE will initiate, facilitate, develop and publish required standards and standards processes for fuel cell power vehicles.



Summary of Work Plan

SAE will utilize a fuel cell standards group/forum to accomplish **Subtopic 6.D. Fuel Cell Codes and Standards** deliverables. The Fuel Cell Standards Group will be chartered on the following premise:

To establish standards and test procedures for fuel cell powered vehicles. The standards will cover safety, performance, reliability and recyclability of fuel cell systems in vehicles with emphasis on efficiency and environmental impact. The standards will also establish test procedures for uniformity in test results for the vehicles/systems/components performance, and define interface requirements of the systems to the vehicles.

The Fuel Cell Standards Group will include the following working groups: **safety, performance, reliability** and **recyclability**. Because of their importance, **terminology, interface** and **emissions** will be included, as resources allow, in the project deliverables, even though these are not specifically included in the subtopic.



Major Steps within the Summary of Work

- Direct support of SAE Fuel Cell Committee and its seven working groups and establishment of new groups where required
- Development of liaisons, collaborations, and cooperative working agreements with technical topic area organizations
- Direct support of Cooperative Research Projects for development and verification of pre-competitive data for use in codes, standards, and recommended practices
- Support for workshops and meetings to facilitate expert advisor input
- Support of technical experts as advisors needed by the SAE Fuel Cell Standards Committee, working groups and Cooperative Research Projects



Project Schedule:

Standards development is a dynamic, constantly evolving process, changing with technology and industry growth and advances. An initial foundation of solid and relevant recommended practices, with an emphasis on safety, that will lead to ease of commercialization that can be achieved in approximately thirty-six (36) months.



Targeted Collaborations

Liaisons within the International Arena:

IEC TC 105

ISO TC 22/SC21

Working Agreements and Indirect Liaisons with:

ISO TC 197

ISO TC 58

IEC TC 69

Cooperative Agreements with:

IEEE

NFPA

BOCA

JEVA

ASME

JAMA

JSAE

Coordination with specific technical target groups include:

US Fuel Cell Council

EVAA

NREL

Canadian Fuel Cell Council

HTAB

NHA

USAF Research Labs

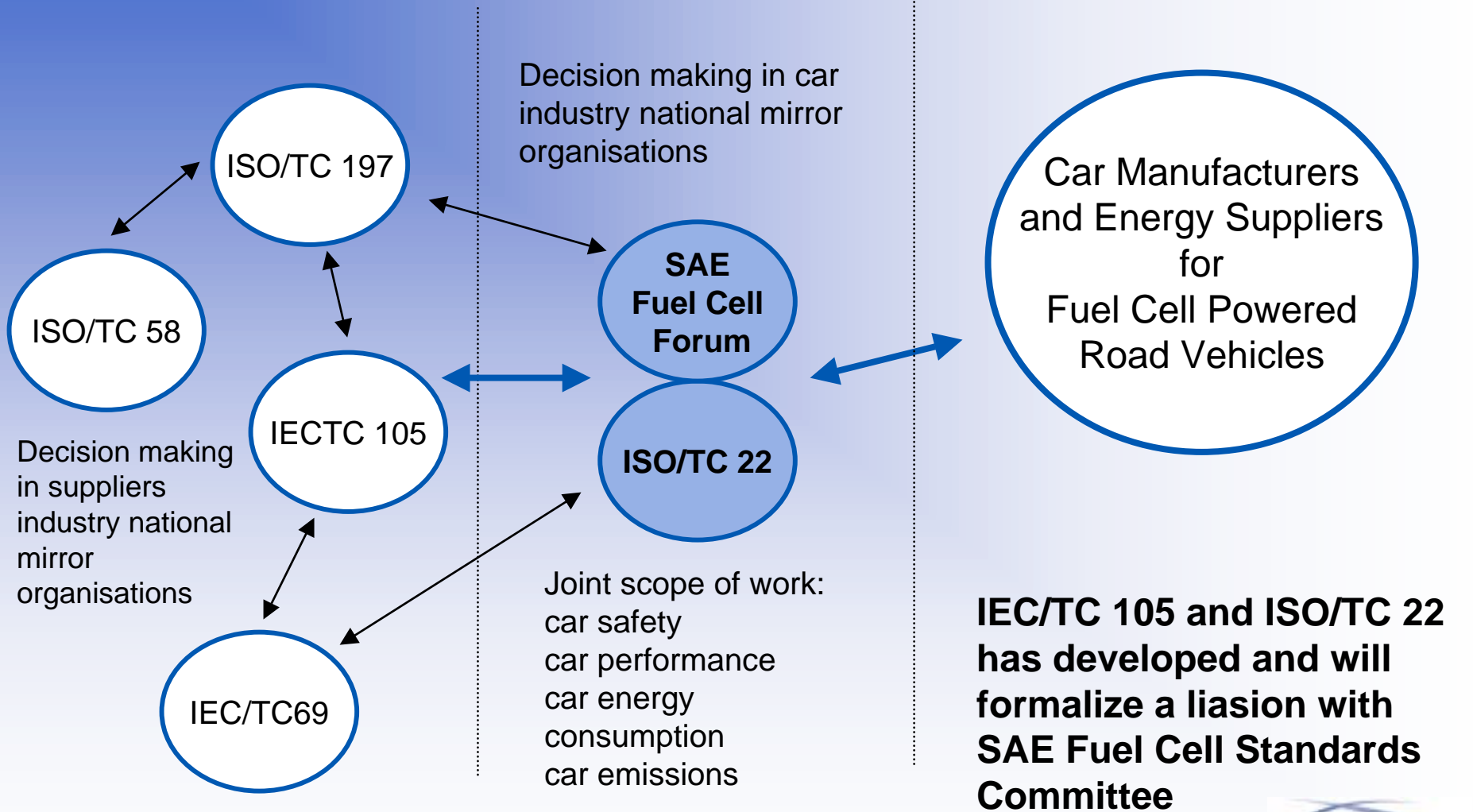
ICC



Pre-Competitive Projects

- Proposes Storage Tank Temperature/Pressure Tests
- H2 Connectors for Gaseous H2
- Communication Protocols for Gaseous H2
- Full Rate/Indication for Gaseous H2
- H2 Properties
- Personal Garages
- Public Parking Garages
- Public Access Ways
- Tunnels
- Bridges
- Limited Access Roadways

Recommended Landscape for Developing Fuel Cell Vehicle Standards



The ultimate goal --

Do it once,

Do it right,

Do it globally

